

IN THE CLAIMS

1. (Currently Amended) An implantable cardiac rhythm management device, comprising:
 - a ventricular sensing channel for sensing ventricular depolarizations and generating a ventricular sense when a depolarization exceeds a specified threshold;
 - a ventricular shock channel for delivering a shock pulse;
 - a controller for detecting ventricular fibrillation from the rate of ventricular senses in the ventricular sensing channel;
 - a thoracic impedance channel for detecting respiratory activity;
 - a diaphragmatic pacing channel for delivering diaphragmatic pacing pulses; and,
 - wherein the controller is programmed to:
 - (a) monitor for the presence of ventricular fibrillation and begin charging an output capacitor of the ventricular shock channel when ventricular fibrillation is detected;
 - (b) monitor spontaneous respiratory activity occurring not as a result of diaphragmatic pacing via the thoracic impedance channel and deliver diaphragmatic pacing while the output capacitor is charging if respiratory arrest is detected;
 - (c) deliver a shock pulse after the output capacitor is charged;
 - (d) monitor for the presence of ventricular fibrillation and return to step (a) if ventricular fibrillation is present;
 - (e) monitor spontaneous respiratory activity via the thoracic impedance channel;
 - (f) deliver diaphragmatic pacing during the ventricular refractory period after a ventricular sense if respiratory arrest is detected and return to step (d).
2. (Original) The device of claim 1 wherein the diaphragmatic pacing channel is also used for delivering cardiac pacing pulses, a diaphragmatic pacing pulse being of higher energy than a cardiac pacing pulse.
3. (Original) The device of claim 2 wherein a diaphragmatic pacing pulse is on the order of 10 to 30 volts.

4-5. (Cancelled)

6. (Original) The device of claim 1 wherein the controller is programmed to deliver a diaphragmatic pacing pulse during a ventricular refractory period after a ventricular sense if respiratory arrest is detected while no ventricular fibrillation is present.

7-10. (Cancelled)

11. (Currently Amended) A method for treating cardiac arrest by an implantable cardiac device, comprising:

(a) monitoring for the presence of ventricular fibrillation via a ventricular sensing channel and beginning charging an output capacitor of the ventricular shock channel when ventricular fibrillation is detected;

(b) monitoring spontaneous respiratory activity occurring not as a result of diaphragmatic pacing via the thoracic impedance channel and deliver diaphragmatic pacing while the output capacitor is charging if respiratory arrest is detected;

(c) delivering a shock pulse after the output capacitor is charged;

(d) monitoring for the presence of ventricular fibrillation and return to step (a) if ventricular fibrillation is present;

(e) monitoring spontaneous respiratory activity via the thoracic impedance channel;

(f) delivering diaphragmatic pacing during the ventricular refractory period after a ventricular sense if respiratory arrest is detected and return to step (d).

12. (Original) The method of claim 11 wherein diaphragmatic pacing is delivered as pacing pulses to the phrenic nerve.

13. (Original) The method of claim 12 where the pacing pulses are on the order of 10 to 30 volts.

14-15. (Cancelled)

16. (Previously Presented) The method of claim 12 further comprising delivering diaphragmatic pacing through a cardiac pacing channel.

17. (Cancelled)